Claims: We claim:

1. A human-machine-interface device for detecting hand manipulations comprising:

   a sensor means for acquiring hand manipulation information;

   a attachment means for attaching sensor means to the human hand whereby the user is not required to hold onto the device.

   a interface electronics means for converting said sensor means information to a signal format that is acceptable to a machine, and;

   a transferring means to convey said interface electronics output signals to a machine.

2. The human-machine-interface of Claim 1 wherein said attachment means is further ergonomically shaped to not interfere with hand movements, whereby the user retains hand dexterity for performing standard office duties such as answering the phone or typing on a computer keyboard.
3. The human-machine-interface of Claim 1 wherein said attachment means is further ergonomically shaped to leave the pads of the finger(s) and / or thumb(s) exposed whereby the user retains the tactile touch senses of the finger and / or thumb pad(s) for typing on a computer keyboard, writing with a pen, or for performing other standard functions that require the touching or gripping surface of the finger or thumb pad(s).
4. The human-machine-interface of Claim 1 wherein said attachment means is further ergonomically shaped to position said sensor means to be manipulated by an opposing finger(s) or thumb, whereby said sensors can be manipulated solely within the confines of the hand, and whereby an additional planar tabletop type surface is not required to manipulate said sensor means.
5. The human-machine-interface of Claim 1 wherein said attachment means is further ergonomically shaped to position said sensor means so that accidental sensor activation is avoided, whereby the user can operate a computer keyboard, answer the phone, or perform other standard functions without accidentally activating said sensor means.
6. The human-machine-interface of Claim 1 wherein said attachment means is further ergonomically shaped to facilitate universal right or left hand operation, and or universal finger or thumb operation, whereby the user can easily remove the device from one finger, thumb, or hand, and relocate the device on a different finger, thumb, or hand.
7. The human-machine-interface of Claim 1 wherein said attachment means further positions a part or all of said sensor means on said attachment means in a relocatable fashion whereby a part or all of said sensor means can be relocated on said attachment means for universal right or left-hand operation, and / or universal thumb or finger operation.

8. The human-machine-interface of Claim 1 wherein said attachment means further positions a part or all of said sensor means on said attachment means in an adjustable fashion whereby the user can adjust and or change the location(s) of a part or all of said sensor means to obtain a customized fit.
9. The human-machine-interface of Claim 1 wherein said transferring means comprises of a cable that is routed between the base knuckles of the hand in a captive fashion whereby the cable will not slip off the top of the hand, and whereby the need for additional cable hold down straps is minimized or eliminated.
10. The human-machine-interface of Claim 1 wherein said transferring means exits said attachment means in a manner that facilitates universal right or left hand operation, and universal thumb or finger operation.
11. The human-machine-interface of Claim 1 further including a relocating means for retracting said sensor means whereby said sensor means can be removed and docked onto or into said relocating means.
12. The human-machine-interface of Claim 11 wherein said transferring means is a cable that is retractable to and extendable from said relocating means whereby said cable is maintained in a snug fashion when said sensor means is deployed, and the cable is neatly withdrawn when said sensor means is retracted.
13. The human-machine-interface of Claim 1 wherein said transferring means employs a wireless transmitter and receiver arrangement whereby the user can work in an un-tethered fashion.
14. The human-machine-interface of Claim 1 wherein said attachment means further includes a non-slip interior means for securing said attachment means onto the hand whereby said attachment means will not twist and turn while said sensor means is being manipulated.
15. The human-machine-interface of Claim 1 wherein said attachment means further includes a adjustable conforming means for securing said attachment means to a wide range finger shapes and sizes whereby a single device is capable of fitting a wide range of users.
16. A method for detecting hand manipulations comprising the steps of:

    acquiring hand manipulation information through a sensor means;

    attaching said sensor means to the human hand whereby the user is not required to hold onto the device;

    converting hand manipulation information from said sensor means to a signal format that is acceptable to a machine, and;

    transferring said signal format to a machine.

17. The method of Claim 16 wherein said attaching further includes the step of attaching said sensor means to the hand in an ergonomic manner to avoid hindering hand movements, whereby the user retains hand dexterity for performing standard office duties such as answering the phone or typing on a computer keyboard.

18. The method of Claim 16 wherein said attaching further includes the step of attaching said sensor means to the hand in an ergonomic manner to leave the pads of the finger(s) and or thumb(s) exposed whereby the user retains the tactile touch senses of the finger and or thumb pad(s) for typing on a computer keyboard, writing with a pen, or for performing other standard functions that require the touching or gripping surface of the thumb or finger pad(s).
19. The method of Claim 16 wherein said attaching further includes the step of ergonomically attaching said sensor means to the hand to provide manipulation by an opposing finger(s) or thumb, whereby said sensors can be manipulated solely within the confines of the hand, and whereby an additional planar tabletop type surface is not required to manipulate said sensor means.
20. The method of Claim 16 wherein said attaching further includes the step of ergonomically attaching said sensor means to the hand so that accidental activation of said sensor means is avoided, whereby the user can operate a computer keyboard, answer the phone, or perform other standard functions without accidentally activating said sensor means.
21. The method of Claim 16 wherein said attaching further includes the step of attaching said sensor means to the hand in an ergonomic manner to facilitate universal right or left hand operation, and or universal finger or thumb operation, whereby the user can easily remove the device from one finger, thumb, or hand, and relocate the device on a different finger, thumb, or hand.
22. The method of Claim 16 wherein said attaching further includes the step of attaching all or part of said sensor means to the hand in an ergonomic manner to position all or part of said sensor means in a moveable fashion whereby all or part of said sensor means can be relocated for universal right or left-hand operation, and or universal thumb or finger operation.
23. The method of Claim 16 wherein said attaching further includes the step of attaching all or part of said sensor means to the hand in an ergonomic manner to further position all or part of said sensor means on said attachment means in a moveable fashion whereby the user can adjust and or change the location(s) of all or part of said sensor means to obtain a customized fit.
24. The method of Claim 16 wherein said transferring means further includes the steps of providing a cable and routing said cable between the base knuckles of the hand in a captive fashion whereby the cable will not slip off the top of the hand, and whereby the need for additional cable hold down straps is eliminated.
25. The method of Claim 16 wherein said transferring means further includes the step of attaching said transferring means to said sensor means in a manner that facilitates universal right or left hand operation, and universal thumb or finger operation.
26. The method of Claim 16 to further include the steps of providing a docking area for retracting and relocating said sensor means onto or into said docking area, whereby said sensor means can be retracted and positioned onto or into said docking area.

27. The method of Claim 26 wherein said transferring further includes the step of providing a cable that is retractable to and extendable from said docking area whereby said cable is maintained in a snug fashion when said sensor means is deployed, and the cable is neatly withdrawn when said sensor means is retracted.
28. The method of Claim 16 wherein said transferring further includes the step of employing a wireless transmitter and receiver arrangement whereby the user can work in an un-tethered fashion.
29. The method of Claim 16 wherein said attaching further includes the step of providing a non-slip interior means for securing said sensor means onto the hand whereby said sensor means will not twist and turn while said sensor means is being manipulated.
30. The method of Claim 16 wherein said attaching further includes the step of providing an adjustable conforming means for securing said sensor means to a wide range finger shapes and sizes whereby a single device is capable of fitting a wide range of users.